CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/SJ/W.No.02/WMM/Gradation/2016-17 29.07.2016

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

Agency : **Mr. S. Jagadish,** Contractor, Bangalore.

Name of Work : Providing pot hole filling to Doddaballapura Main Road & Village area in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.

Reference : AEE/BBMP/YSD/AE-2/466/2016-17 Dated: 27.07.2016

Date of Testing : 29.07.2016

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 8640

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	180	180	2.1	97.9	95-100
22.4	2650	2830	32.8	67.2	60-80
11.2	1350	4180	48.4	51.6	40-60
4.75	1210	5390	62.4	37.6	25-40
2.36	1005	6395	74.0	26.0	15-30
0.600	990	7385	85.5	14.5	8-22
0.075	865	8250	95.5	4.5	0-8

Note:

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2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

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Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	**Mr. S. Jagadish,** Contractor, Bangalore.
Name of the Work	Providing pot hole filling to Doddaballapura Main Road & Village area in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	AEE/BBMP/YSD/AE-2/466/2016-17 Dated: 27.07.2016
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	29.07.2016

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	379	383	
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	78	79	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	304	
4	Aggregate Impact value = percent fines	20.58	20.63	
	$100^* (W_3/W_1)\%$			20.60

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	**Mr. S. Jagadish,** Contractor, Bangalore.
Name of Work	Providing pot hole filling to Doddaballapura Main Road & Village area in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	AEE/BBMP/YSD/AE-2/466/2016-17 Dated: 27.07.2016
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	29.07.2016

Result : Flakiness Index = 12.35%

Elongation Index = 13.25%

Result : Combined Flakiness & Elongation index 25.60%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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Job No: CTCE/BBMP/SJ/W.No.02/BC/Bitumen/2016-17 01.08.2016

BITUMEN CONTENT DETERMINATION OF BITUMINOUS CONCRETE MIX

As per IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	**Mr. S. Jagadish,** Contractor, Bangalore.
NAME OF THE WORK	Providing pot hole filling to Doddaballapura Main Road & Village area in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	AEE/BBMP/YSD/AE-2/466/2016-17 Dated: 27.07.2016
SAMPLE I/D	Pot hole filling to Roads in Doddaballapura Main Road & Village area in Ward No.02.
DATE OF TESTING	01.08.2016

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474	473
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	26	27.00
7. Bitumen content in %	5.20	5.40
8. Average	5.30	

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Job No: CTCE/BBMP/SJ/W.No.02/BC/Bitumen/2016-17 01.08.2016

BITUMEN CONTENT AFTER GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

As Per IS 2386 and IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	**Mr. S. Jagadish,** Contractor, Bangalore.
NAME OF THE WORK	Providing pot hole filling to Doddaballapura Main Road & Village area in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	AEE/BBMP/YSD/AE-2/466/2016-17 Dated: 27.07.2016
SAMPLE I/D	Pot hole filling to Roads in Doddaballapura Main Road & Village area in Ward No.02.
DATE OF TESTING	01.08.2016

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-18 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	44.36	9.36	9.36	90.64	79-100
9.5	36.32	7.66	17.02	82.98	70-88
4.75	71.22	15.03	32.05	67.95	53-71
2.36	68.25	14.40	46.45	53.55	42-58
1.18	51.23	10.81	57.25	42.75	34-48
0.6	54.12	11.42	68.67	31.33	26-38
0.3	46.35	9.78	78.45	21.55	18-28
0.15	39.36	8.30	86.75	13.25	12-20
0.075	41.22	8.70	95.45	4.55	4-10

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-18 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	35.26	7.45	7.45	92.55	79-100
9.5	46.36	9.80	17.26	82.74	70-88
4.75	64.25	13.58	30.84	69.16	53-71
2.36	71.28	15.07	45.91	54.09	42-58
1.18	76.36	16.14	62.05	37.95	34-48
0.6	43.26	9.15	71.20	28.80	26-38
0.3	33.13	7.00	78.20	21.80	18-28
0.15	25.26	5.34	83.54	16.46	12-20
0.075	45.25	9.57	93.11	6.89	4-10

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